

## A New Species of the Anthiine Fish Genus *Plectranthias* (Serranidae) from the Fiji Islands

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**Abstract** *Plectranthias fijiensis*, a new anthiine fish species from Fiji is described and illustrated from a single specimen. This species is distinguished from other members of the genus by possessing some branched pectoral rays, preopercle edge without serrae or spines, snout without scales dorsally or laterally, and some canine teeth in both jaws.

The genus *Plectranthias* was recently revised by Randall (1980); he recognized 17 existing species and described 13 new ones. Fourmanoir and Rivaton (1980) also described *Plectranthias randalli* and Katayama and Masuda (1980) described *P. altipinnatus* from Sagami Bay, Japan. Thus, to date, the genus consisted of 32 species.

Recently a specimen of *Plectranthias* was caught by us in a trap, set for carid prawns, on the outer reef slope of the Suva Barrier Reef, in the Fiji Islands, at a depth of 293 m. This specimen is clearly different from all other known *Plectranthias* species. We describe and illustrate this specimen as a new species.

Methods for counts and measurements follow Randall (1980).

The holotype is deposited in the Institute of Marine Resources, the University of the South Pacific (USP).

### *Plectranthias fijiensis* sp. nov.

(Fig. 1)

**Holotype.** USP 4392, 74.7 mm SL (standard length), collected in a trap from R/V "Nautilus" at a depth of 293 m, on September 30, 1981, of Suva Barrier Reef (18°12'S, 178°25'E), Fiji Islands.

**Diagnosis.** D. X, 15; some pectoral-fin rays branched; no antrorse spines on lower margin of preopercle; upper margin of preopercle smooth; dorsal surface of head anterior to nostrils not scaled; canine teeth present on both jaws; body depth 2.69 in SL; orbit diameter 3.48 in head; maxilla scaled.

**Description.** Dorsal fin rays X, 15 (all soft rays branched); anal fin rays III, 7 (all soft rays branched); pectoral-fin rays 15. Counting from

dorsal margin the 1st, 9th, 10th, 11th and 12th rays of pectorals unbranched. All other rays branched. Pelvic-fin rays I, 5 (all soft rays branched); branched caudal rays 15 (8+7); procurent and unbranched caudal rays 6+6; lateral line complete with 32 tube bearing scales; lateral line gently arched over pectoral region; the highest point of lateral line below base of 4th and 5th dorsal spines where 2 rows of large scales lie between lateral line and dorsal-fin base; scales above lateral line to insertion of first dorsal spine  $2\frac{1}{2}$ ; scales below lateral line to origin of anal fin  $10\frac{1}{2}$ ; predorsal scales about 20 (some irregular); circumpeduncular scales 12; dorsal part of head scaled up to posterior nostril; region anterior to nostrils unscaled; 4 distinct mandibular pores present; mandible scaled up to posterior-most mandibular pore; suborbital scaled up to nearly vertical from anterior edge of eye; maxilla scaled dorsally while a third unscaled; branchiostegal rays 7; 7 diagonal rows of large scales between eye and posteroventral edge of preopercle; about 10 prepelvic scales; small scales present on all fin bases except for spinous portion of dorsal fin (basal scales lost from some spines).

Total gill rakers 5+11, longest gill raker at angle of gill arch. Depth of body 2.69 in SL; width of body 1.82 in depth; head length 2.43 in SL; orbit diameter 3.84 in head; bony interorbital width 2.34 in snout; least depth of caudal peduncle 3.01 in head; mouth moderately large; lower jaw protruding anterior to upper one; maxilla extending beyond a vertical at mid point of eye when mouth is closed; supramaxilla absent; teeth in upper jaw in a villiform band, about 7 irregular rows anteriorly tapering to a single

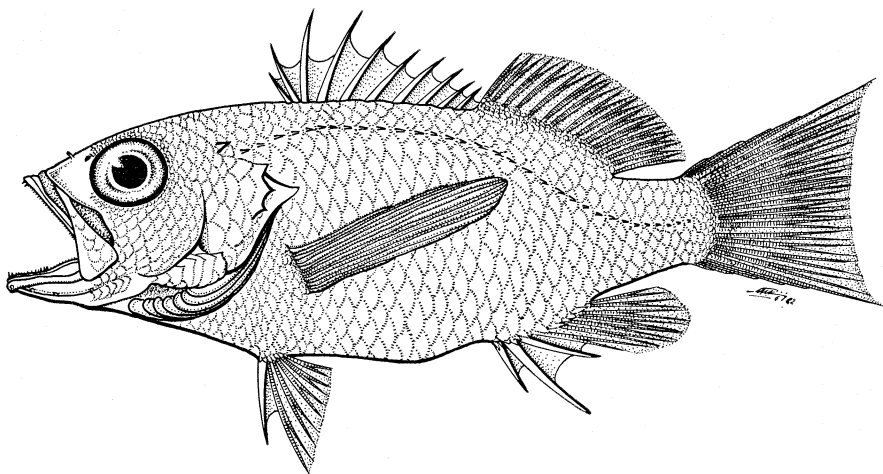


Fig. 1. *Plectranthias fijiensis* sp. nov., holotype, 74.7 mm SL, Fiji Islands, USP 4392.

tooth posteriorly; inner teeth, at side of symphysis, which are largest and depressible are elongate and incurved; two moderately large canine teeth present in outer row at front of each side of upper jaw separated by a gap 10 in head length; upper jaw length 1.96 in head; lower jaw teeth also in a band of 6 irregular rows anteriorly and 2 posteriorly; inner-most and outer-most rows of teeth on lower jaw larger than the rest but not so on upper jaw; a canine tooth present about half way from symphysis on right side of lower jaw; 3 canines in a group present in same area on left side; vomer bow-shaped, with about 5 irregular rows of small teeth, about 4 rows on palatines.

Three flat spines on opercle, middle one (largest) reaches most posteriorly and is closer to lower spine; opercular membrane produced to a pointed flap, projecting upwards towards eighth dorsal spine from a region of middle opercular spine; lower and upper margins of preopercle smooth; subopercle and interopercle also smooth. Tongue edentate.

Post-temporal projects just dorsal to beginning of upper margin of operculum.

Nostrils small, at level of upper third of eye; anterior nostril in a short tube the posterior edge of which is more elevated; posterior nostril larger, near edge of orbit, and with a slightly raised rim.

Dorsal fin origin above third pored lateral-line scale; fourth and fifth dorsal spine longest, their lengths 3.3 in head, respectively; the last

spine 2.68 times in length of first dorsal soft ray; all dorsal soft rays branched; longest dorsal ray (ninth) 2.77 in head; dorsal fin base 2.15 in SL, length of last dorsal soft ray 3.84 in head; length of penultimate dorsal soft ray 3.53 in head; second anal spine longest (broken); anal fin base 2.63 in head; length of last anal soft ray 3.70 in head; length of penultimate anal soft ray 3.30 in head; length of longest anal soft ray (3rd) 1.98 in head; caudal fin emarginate, fin membrane and tips of rays broken during collection. Its length approximately 1.79 in head; pectoral fins long, the longest ray (tenth) reaching vertical from base of second anal soft ray and its length 2.87 in SL; pelvic fins relatively short, 1.70 in head, not reaching vent; pelvic spine 1.80 in head.

Color when freshly caught, generally orange with distinct yellow spots.

On dorsal surface of body 8 distinct yellow spots; a yellow band running from interorbital to edge of premaxilla. Eight yellow spots present below lateral line. Most posteriorly-placed yellow spots occur distinctly at the base of dorsal and ventral parts of caudal fin. Spinous fin membrane with a distinct yellow coloration forming dots at edge of membrane; other parts of membrane white; spines orange. A slight tinge of yellow mixed with orange at base of dorsal-fin rays; tips of dorsal-fin rays with yellowish-orange tinge. Caudal rays with similar coloration.

Pelvic fin with white anterior margin but re-

maining parts yellowish-orange; anal fin membrane with distinctive white coloration particularly at beginning of fin rays but membrane generally yellowish-orange. Belly white but body generally with shades of orange. Tip of lower jaw with a yellow blotch on either side of symphysis which itself is pinkish-orange.

Operculum with yellowish-orange spot almost iridescent. Eyes black with yellow horizontal band. A pink dot just at end of each dorsal ray.

Color in formalin: white with eight yellow and black spots along dorsal edge of body to caudal peduncle. Seven spots present in a horizontal plane from eye to ventral caudal lobe.

**Remarks.** The new species is closely similar to *Plectranthias megalophthalmus* Randall in many aspects. These two species differ from all other species of *Plectranthias* in the combination of the following points: (1) upper and lower margins of preopercle smooth; (2) some pectoral rays branched; (3) maxillary scaled. The new species is distinguishable from *P. megalophthalmus* in having smaller eye (3.48 instead of 2.9 in head length), higher body depth (2.69 instead of 3.4 in SL) and no canine teeth on jaws.

The color of the new species is very reminiscent of *P. kamii* (the specimen identified by Masuda et al., 1975 as *P. anthioides*) but differs in meristic characters such as a lower soft dorsal ray count, less tube bearing scales on lateral line, and in lacking the produced third dorsal spine.

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#### フィジー諸島沖から得られたハナダイ亜科のイズハナダイ属の1新種

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フィジー諸島沖の水深 293 m から得られたハナダイ亜科の1新種 *Plectranthias fijiensis* を記載した。本種は胸鰭に分枝軟条があること、前鰓蓋骨下縁と上縁に鋸歯も棘もないこと、吻の鼻孔より前方の背側に鱗がないこと、両顎に犬歯があることなどで同属の既知種と識別される。